



1. Application details

1.1. Permit application details

Permit application No.: 1664/1
 Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Rockingham Lifestyle Village Pty Ltd

1.3. Property details

Property:
 Local Government Area: City Of Rockingham
 Colloquial name: Mandurah Road

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.546		Mechanical Removal	Road construction or maintenance

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
<p>Heddlle Vegetation Complex:</p> <p>Transitional between</p> <ul style="list-style-type: none"> - Cottesloe Complex Central and South - mosaic of woodland of <i>E. gomphocephala</i> and open forest of <i>E. gomphocephala</i> - <i>E. marginata</i> - <i>E. calophylla</i>; closed heath on the limestone outcrops. - Quindalup Complex - coastal dune complex consisting mainly of two alliances - the strand and fore-dune alliance and the mobile and stable dune alliance. Local variations include the low closed forest of <i>M. lanceolata</i> - <i>Callitris preissii</i> and the closed scrub of <i>Acacia rostellifera</i>. <p>Beard Vegetation Association: 998 - Medium woodland; tuart</p>	<p>Proposal to clear 0.546 hectares of native vegetation for the purpose of road construction for the entrance to the proposed lifestyle village.</p> <p>The vegetation under application on the western side of the road reserve mainly comprises weeds and grasses, with some <i>Lepidosperma gladiatum</i> (Coastal Sword Sedge) and two <i>Eucalyptus gomphocephala</i>. The vegetation under application on the eastern side of the road comprises mainly <i>Acacia rostellifera</i> with an occasional <i>Macrozamia reidii</i> and regrowth of <i>Grevillea sp.</i> and <i>Dryandra sessilis</i>.</p>	<p>Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)</p>	<p>Vegetation clearing description based on a site visit conducted by a DEC officer on 17 January 2007. Vegetation ranges from degraded to completely degraded.</p>

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments **Proposal is not likely to be at variance to this Principle**
 The vegetation under application is 0.546 hectares located within a road reserve and is in a degraded to completely degraded condition with a low species diversity. It is therefore not considered likely that the vegetation under application comprises a high level of biological diversity.

Methodology DEC site visit 17/1/07

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments Proposal is not likely to be at variance to this Principle

The vegetation under application is degraded to completely degraded and comprises mainly *Acacia rostellifera* with two Tuarts and a limited amount of sedges. There is a lack of understorey and during the site visit no hollows were observed in the two Tuarts that could potentially provide habitat for native fauna.

Given the low species diversity and lack of understorey it is not considered likely that the vegetation under application comprises significant habitat for indigenous fauna.

Methodology DEC site visit 17/1/07

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments Proposal is not likely to be at variance to this Principle

There are no known occurrences of Declared Rare Flora (DRF) or Priority Flora within the local area (5km radius) of the application and the vegetation under application is in a degraded to completely degraded condition. It is therefore not considered likely that the vegetation under application includes, or is necessary for the continued existence of, rare flora.

Methodology DEC site visit 17/1/07
GIS Database: Declared Rare and Priority Flora List - CALM 01/07/05

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Comments Proposal is not likely to be at variance to this Principle

There are 15 known occurrences of Threatened Ecological Communities (TEC) within the local area (5km radius) of the application, the closest of which is located 2.3km to the south within the adjacent Bush Forever site.

The Bush Forever study identified the TEC to be associated with the Spearwood Dune System as *Melaleuca huegellii* - *Melaleuca acerosa* shrublands on Limestone ridges (26a). The TEC located within the adjacent Bush Forever site is identified as Sedgeland in Holocene dune swales (19) which is generally located in seasonal wetlands (Government of Western Australia 2000).

A limited amount of Coastal Sword Sedge *Lepidosperma gladiatum* was observed within the area under application, however it is located outside of the wetland and the vegetation in this section is in a completely degraded condition. No *Melaleuca* species were observed. It is therefore not considered likely that the vegetation under application comprises, or is necessary for the maintenance of, a TEC.

Methodology DEC site visit 17/1/07
Government of Western Australia (2000)
GIS Database: Threatened Ecological Communities - CALM 12/4/05

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments Proposal is not likely to be at variance to this Principle

Hedde et al. (1980) defines the vegetation under application as being transitional between 'Cottesloe Complex - Central and South' and 'Quindalup Complex'. These complexes have 41.1% and 47.1% respectively of pre-European vegetation extent remaining (Shepherd et al. 2001) and are considered to be of 'depleted' status for biodiversity conservation (Department of Natural Resources and Environment 2002).

The vegetation under application is also classified as vegetation association 998, of which there is 35.9% of pre-European extent remaining and which is also considered to be depleted (Shepherd et al. 2001).

The identified vegetation types have representations above the recommended minimum level of 30%, as recognised by both the EPA and the State Government (EPA, 2003; Department of Natural Resources and Environment, 2002). In addition, the vegetation under application is in a degraded to completely degraded condition and therefore the proposal is not considered likely to be at variance with this principle.

	Pre-European (ha)	Current (ha)	Remaining %	Conservation status***	% reserves
Swan Coastal Plain	1,529,235	657,450	43.0*	Depleted	
City of Rockingham	24,326	8,534	35.1*	Depleted	
Local Area (~10km radius)					
Hedde vegetation complex			**		
Quindalup Complex	38,238	18,000	47.1	Depleted	5.2

Cottesloe Complex - C&S	44,995	18,474	41.1	Depleted	8.8
Beard vegetation associations 998	51,094	18,320	35.9*	Depleted	32.9

* (Shepherd et al. 2001)
 **(EPA, 2003)
 *** (Department of Natural Resources and Environment 2002)

Methodology Heddle et al. (1980)
 Shepherd et al. (2001)
 Department of Natural Resource and Environment (2002)
 EPA (2003)
 GIS Databases:
 Heddle Vegetation Complexes - DEP 21/06/95
 Pre-European Vegetation - DA 01/01

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments **Proposal is not likely to be at variance to this Principle**
 The area under application is located approximately 20m to the east of Coo loongup Lake, which is a Conservation Category Wetland (CCW).

The vegetation under application includes a small portion of the Coastal Sword Sedge *Lepidosperma gladiatum* on the western shoulder of the road, however this species is not considered to be wetland dependent.

Given that the vegetation under application is located on the shoulder of the road and 20m from the wetland boundary it is not considered to be growing in association with the wetland. The proposal therefore is not considered likely to be at variance to this Principle.

Methodology DEC site visit 17/1/07
 GIS Databases:
 EPP, Lakes - DEP 1/12/92
 Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments **Proposal is not likely to be at variance to this Principle**
 The soils within the area under application are identified as part of Spearwood S1d Phase, which are described as moderately deep to very deep siliceous yellow-brown sands with rare limestone outcrop. These soils are associated with a low risk of wind erosion, waterlogging, salinity and acid sulphate soils, however there is a high risk of water erosion and phosphorus export (State of Western Australia 2005).

The main land degradation risk associated with the proposed clearing is considered to be water erosion on the western side of the road; however the vegetation under application on the western side comprises two Tuarts and a limited amount of Coastal Sword Sedge. It is therefore not considered likely that the proposed clearing would result in appreciable land degradation.

Methodology DEC site visit 17/1/07
 State of Western Australia (2005)

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments **Proposal is not likely to be at variance to this Principle**
 The area under application is directly adjacent to the Rockingham Lakes Regional Park, which is also a Bush Forever site. Coo loongup Lake, which is a Conservation Category Wetland (CCW) and an EPP Lake, is located within the Regional Park approximately 20m to the west of the area under application.

The vegetation under application comprises 0.546 hectares and is located outside of the Regional Park on the western shoulder of the road and on the opposite side of the road. It is therefore not considered likely that the proposal would impact on the environmental values of any adjacent or nearby conservation reserves.

In addition, the DEC Regional Parks Unit has advised that they have no objection to the proposed clearing as it is occurring outside of the Regional Park boundary.

Methodology DEC site visit 17/1/07

GIS Databases:
 Bushforever - MFP 07/01_1
 EPP, Lakes - DEP 1/12/92
 Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments Proposal is not likely to be at variance to this Principle

Groundwater salinity in the local area is 500-1000 mg/L and the area under application is not located within a Public Drinking Water Source Area (PDWSA). Watercourses in the area include Coo loongup Lake 20m to the west and Walungup Lake 2.5km to the southwest.

Given that the area under application is 0.546 hectares within an existing road reserve it is considered that the proposed clearing is not likely to significantly alter surface water flow regimes or groundwater levels.

The proposed clearing is 20m from a Conservation Category Wetland (CCW) on the western side, with the soils in the area having a high risk of water erosion (State of Western Australia 2005). Given the clearing on the west of the road is limited to two Tuarts and some Coastal Sword Sedge on the edge of the road shoulder, it is not considered likely that the proposal would cause deterioration of water quality in the wetland. The proposal is therefore not considered likely to be at variance to this Principle.

Methodology DEC site visit 17/1/07
 State of Western Australia (2005)
 GIS Databases:
 Groundwater Salinity, Statewide - 22/02/00
 Hydrography, linear (hierarchy) - DOW
 Public Drinking Water Source Areas (PDWSAs) - DOE 07/02/06

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments Proposal is not likely to be at variance to this Principle

The area under application is located approximately 20m to the east of Coo loongup Lake, at an elevation of 5-10 metres. The proposed clearing includes 0.546 hectares of vegetation and therefore it is not considered likely that the removal of vegetation from site would have an impact on peak flood height or duration.

Methodology GIS Databases:
 Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC
 Topographic Contours, Statewide - DOLA 12/09/02

Planning Instrument, Native Title, Previous EPA decision or other matter.

Comments

The area under application is located within a Native Title Claim area; however it is contained within an existing road reserve that is vested in the City of Rockingham. The City of Rockingham has authorised National Lifestyle Villages to conduct works within the road reserve associated with road construction. Therefore the clearing as proposed should not fall under the future acts process under the Native Title Act 1993.

The DEC Regional Parks Unit have advised that they have no objection to the proposal, but request that vegetation is marked prior to clearing, there is no vehicle access to the Regional Park, and no vegetation is disposed in the Regional Park.

Methodology GIS Database: Native Title Claims - DLI 7/11/05

4. Assessor's comments

Purpose	Method Applied	Comment
Road construction maintenance	Mechanical Removal 0.546 area (ha)/ trees	The assessable criteria have been addressed and no objections were raised. The assessing officer therefore recommends that the permit be granted.

5. References

Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.

EPA (2003) Guidance for the Assessment of Environmental Factors -level of assessment of proposals affecting natural areas within the System 6 region and Swan Coastal Plain portion of the System 1 Region. Report by the EPA under the

Environmental Protection Act 1986. No 10 WA.

Government of Western Australia (2000) Bush Forever Volumes 1 and 2. Western Australian Planning Commission, Perth WA.

Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

State of Western Australia (2005) Agmaps Land Manager CD Rom.

6. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DEC)

